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EXAMINER	
THOMPSON, JAMES A	
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SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/630,435	TAI ET AL.	
	Examiner	Art Unit	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-16,18-21,27-30 and 40-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-16,18-21,27-30 and 40-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 06 November 2006 have been fully considered but they are not persuasive.

Barry (US Patent 5,596,416) has not been relied upon expressly to teach that the RIP data for a print job be changed while the print job is being printed. Rather, it is the *combination* of Rourke (US Patent 5,995,721) and Barry that teaches this feature. Rourke teaches changing the RIP Data in accordance with an operator's adjustments (figure 11(145) and column 12, lines 49-52 of Rourke), such that the changing of the RIP Data occurs while the printing system is parsing a print job, thereby resulting in a corresponding contemporaneous change in an appearance of the print job (figure 11(138,140) and column 12, lines 38-45 and lines 52-61 of Rourke). Barry teaches that parsing, RIPing and printing occur in an overlapping manner (figure 6 and column 10, lines 18-38 of Barry). Thus, as soon as one page or group of pages is ready to print, the page or group of pages is printed while the page or group of pages to be printed afterwards is in the process of being parsed and RIPed. As explained in the arguments regarding claim 13, both below and in the previous office action, Barry teaches printing the page or group of pages immediately after the operations necessary for preparation are completed, thus performing the preparatory operations of later pages while the earlier pages are still in the process of actual printing. Thus, by applying the teachings of Barry to Rourke, the changing of the RIP Data would occur while the printing system is printing the print job since, as soon as the parsing and editing is performed for a prior page or group of pages, the pages would be printed while the next page or group of pages is being parsed and edited. Therefore, by *combination*, Rourke in view of Barry teaches that the RIP data for a print job is changed while the print job is being printed.

Finally, the newly added claims have been fully considered by Examiner. The prior art rejections of the newly added claims are set forth in detail below. Since new grounds of rejection are required only for the newly added claims, the present Office action is made final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 13, 18, 27 and 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rourke (US Patent 5,995,721) in view of Barry (US Patent 5,596,416).

Regarding claim 13: Rourke discloses an image processing method implemented in a printing system (figure 2 and column 8, lines 16-25 of Rourke), the method comprising the steps of:

- providing rasterized color separated contone gray level image data (RIP Data) (column 6, lines 48-54 and column 9, lines 51-56 of Rourke).
- changing the RIP Data in accordance with an operator's adjustments (figure 11(145) and column 12, lines 49-52 of Rourke), such that the changing of the RIP Data occurs while the printing system is parsing a print job, thereby resulting in a corresponding contemporaneous change in an appearance of the print job (figure 11(138,140) and column 12, lines 38-45 and lines 52-61 of Rourke).
- subjecting the changed RIP Data to a halftone process to generate halftone rendered data (column 6, lines 48-54 and column 12, lines 34-37 of Rourke). Printers such as ink jet printers, laserjet printers, and digital copiers are used to print (column 6, lines 48-54 of Rourke) full color and pictoral image data (column 12, lines 34-37 of Rourke). Thus, halftone processing of the RIP Data to generate halftone rendered data is inherent.
- outputting the halftone rendered data, or a derivative thereof, for subsequent printing (column 13, lines 28-39 of Rourke).

Rourke does not disclose expressly that the changing of the RIP Data occurs while the printing system is specifically printing a print job.

Barry discloses that parsing, RIPing and printing occur in an overlapping manner (figure 6 and column 10, lines 18-38 of Barry). Thus, as soon as one page or group of pages is ready to print, the page or group of pages is printed while the page or group of pages to be printed afterwards is in the process of being parsed and RIPed.

Rourke and Barry are combinable because they are from the same field of endeavor, namely high-volume distributed printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print the page or group of pages immediately after the operations necessary for preparation are completed, thus performing the preparatory operations of later pages while the earlier pages are still in the process of actual printing, as taught by Barry. As applied to Rourke, the changing of the RIP Data would occur while the printing system is printing the print job since, as soon as the parsing and editing is performed for a prior page or group of pages, the pages would be printed while the next page or group of pages is being parsed and edited. The motivation for doing so would have been that overlapping the preparatory operations with the printing operations in a print job according to the teachings of Barry would increase the overall throughput of the printing system. This is clearly a desirable result for the system of Rourke. In fact, Rourke places the print data in the job to be edited initially in a RIPed format to facilitate a print-on-demand system (column 9, lines 46-56 of Rourke). Applying the teachings of Barry to Rourke further increases the speed and capacity of the print-on-demand system taught by Rourke. Therefore, it would have been obvious to combine Barry with Rourke to obtain the invention as specified in claim 13.

Regarding claim 18: Rourke discloses a method of altering the appearance of an input digital image when printed (figure 11 and column 12, lines 49-52 of Rourke), the method comprising the steps of:

- rasterizing the input digital image into a rasterized image data (RID) (column 9, lines 51-56 of Rourke).
- separating the RID into separated rasterized contone gray level image data (column 6, lines 48-54 and column 9, lines 51-56 of Rourke). As is well-known in the art, when color image data, which is used in the color printers (column 9, lines 51-56 of Rourke), is RIPed (column 6, lines 48-54 of Rourke), the resultant RIP data is color separated according to the ink colors of the color printer that is to be used in printing.
- altering the separated rasterized contone gray level image data in accordance with an operator's adjustments (figure 11(145) and column 12, lines 49-52 of Rourke), such that the altering occurs while a print job is being parsed, thereby resulting in a corresponding contemporaneous change in an appearance of the print job (figure 11(138,140) and column 12, lines 38-45 and lines 52-61 of Rourke).
- subjecting the altered rasterized image data to a halftone process to generate halftone rendered data (column 6, lines 48-54 and column 12, lines 34-37 of Rourke). Printers such as ink jet

printers, laserjet printers, and digital copiers are used to print (column 6, lines 48-54 of Rourke) full color and pictoral image data (column 12, lines 34-37 of Rourke). Thus, halftone processing of the RIP Data to generate halftone rendered data is inherent.

- outputting the halftone rendered data, or a derivative thereof, for subsequent printing (column 13, lines 28-39 of Rourke).

Rourke does not disclose expressly that the altering of the separated rasterized contone gray level image data occurs while the printing system is specifically printing a print job.

Barry discloses that parsing, RIPing and printing occur in an overlapping manner (figure 6 and column 10, lines 18-38 of Barry). Thus, as soon as one page or group of pages is ready to print, the page or group of pages is printed while the page or group of pages to be printed afterwards is in the process of being parsed and RIPed.

Rourke and Barry are combinable because they are from the same field of endeavor, namely high-volume distributed printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print the page or group of pages immediately after the operations necessary for preparation are completed, thus performing the preparatory operations of later pages while the earlier pages are still in the process of actual printing, as taught by Barry. As applied to Rourke, the altering of the separated rasterized contone gray level image data would occur while the printing system is printing the print job since, as soon as the parsing and editing is performed for a prior page or group of pages, the pages would be printed while the next page or group of pages is being parsed and edited. The motivation for doing so would have been that overlapping the preparatory operations with the printing operations in a print job according to the teachings of Barry would increase the overall throughput of the printing system. This is clearly a desirable result for the system of Rourke. In fact, Rourke places the print data in the job to be edited initially in a RIPed format to facilitate a print-on-demand system (column 9, lines 46-56 of Rourke). Applying the teachings of Barry to Rourke further increases the speed and capacity of the print-on-demand system taught by Rourke. Therefore, it would have been obvious to combine Barry with Rourke to obtain the invention as specified in claim 18.

Regarding claim 27: Rourke discloses an apparatus (figure 2 of Rourke) for processing a digital image (figure 11 and column 12, lines 49-52 of Rourke) comprising:

- a printer (figure 2(12-1) of Rourke) configured at least to print a print job (column 6, lines 45-48 of Rourke).

- a raster image processor (RIP) (figure 1(25(portion)) and column 9, lines 24-26 of Rourke) configured at least to provide rasterized color separated contone gray level image data (RIP Data) (column 6, lines 48-54 and column 9, lines 51-56 of Rourke).
- an image processor (figure 1(25(portion)) and column 9, lines 24-26 of Rourke) configured at least to:
    - alter the RIP Data in accordance with an operator's adjustments (figure 11(145) and column 12, lines 49-52 of Rourke), such that the altering occurs while a print job is being parsed, thereby resulting in a corresponding contemporaneous change in an appearance of the print job (figure 11(138,140) and column 12, lines 38-45 and lines 52-61 of Rourke).
    - subject the altered RIP Data to a halftone process to generate halftone rendered data (column 6, lines 48-54 and column 12, lines 34-37 of Rourke). Printers such as ink jet printers, laserjet printers, and digital copiers are used to print (column 6, lines 48-54 of Rourke) full color and pictoral image data (column 12, lines 34-37 of Rourke). Thus, halftone processing of the RIP Data to generate halftone rendered data is inherent.
    - output the halftone rendered data, or a derivative thereof, for subsequent printing (column 13, lines 28-39 of Rourke).

→ The raster image processor (RIP) and image processor are both embodied in the server (figure 2(25) of Rourke) as portions of the physically-embodied software executed by the server to perform the corresponding tasks (column 9, lines 24-26 and lines 46-56 of Rourke).

Rourke does not disclose expressly that the altering of the RIP Data occurs while the printer is specifically printing the print job.

Barry discloses that parsing, RIPing and printing occur in an overlapping manner (figure 6 and column 10, lines 18-38 of Barry). Thus, as soon as one page or group of pages is ready to print, the page or group of pages is printed while the page or group of pages to be printed afterwards is in the process of being parsed and RIPed.

Rourke and Barry are combinable because they are from the same field of endeavor, namely high-volume distributed printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print the page or group of pages immediately after the operations necessary for preparation are completed, thus performing the preparatory operations of later pages while the earlier pages are still in the process of actual printing, as taught by Barry. As applied to Rourke, the altering of the separated rasterized contone gray level image data would occur while the printer is printing the print job since, as soon as the parsing and editing is performed for a prior page or group of pages, the pages

would be printed while the next page or group of pages is being parsed and edited. The motivation for doing so would have been that overlapping the preparatory operations with the printing operations in a print job according to the teachings of Barry would increase the overall throughput of the printing system. This is clearly a desirable result for the system of Rourke. In fact, Rourke places the print data in the job to be edited initially in a RIPed format to facilitate a print-on-demand system (column 9, lines 46-56 of Rourke). Applying the teachings of Barry to Rourke further increases the speed and capacity of the print-on-demand system taught by Rourke. Therefore, it would have been obvious to combine Barry with Rourke to obtain the invention as specified in claim 27.

Regarding claim 45: Rourke discloses that the RIP Data is final RIP Data that is not subjected to further rasterization prior to printing by the printing system (column 13, lines 28-39 of Rourke). Once the print job is processed, the RIP Data is delivered directly to the job integrator, and is printed immediately based solely upon the resultant RIP Data (column 13, lines 28-39 of Rourke). Thus, the RIP Data is final RIP Data that is not subjected to further rasterization prior to printing by the printing system.

Regarding page 46: Rourke discloses that the RID is data that is not subsequently rerasterized prior to printing (column 13, lines 28-39 of Rourke). Once the print job is processed, the RID is delivered directly to the job integrator, and is printed immediately based solely upon the resultant RID (column 13, lines 28-39 of Rourke). Thus, the RID is data that is not subsequently rerasterized prior to printing.

Regarding page 47: Rourke discloses that the RIP Data is final RIP Data that is not subjected to further rasterization prior to printing by the printer (column 13, lines 28-39 of Rourke). Once the print job is processed, the RIP Data is delivered directly to the job integrator, and is printed immediately based solely upon the resultant RIP Data (column 13, lines 28-39 of Rourke). Thus, the RIP Data is final RIP Data that is not subjected to further rasterization prior to printing by the printer.

4. Claims 14, 16, 19, 21, 28, 30 and 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rourke (US Patent 5,995,721) in view of Barry (US Patent 5,596,416) and Hayashi (US Patent 5,790,282).

Regarding claim 14: Rourke in view of Barry does not disclose expressly subjecting the changed RIP Data to first and second halftone processes and then blending the respective outputs from the first and second halftone processes to provide a blended output.

Hayashi discloses subjecting image data to a first halftone process (figure 2(46) and column 4, lines 63-67 of Hayashi) and a second halftone process (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi), and then blending the respective outputs from said first and second halftone processes

to provide a blended output (figure 2(48) and column 5, lines 3-6 of Hayashi). The image data is saturation adjusted by the color correction circuit (figure 2(43) and column 5, lines 18-20 of Hayashi). Said image data is then sent through two halftone processing devices. Said devices are the image quality correction circuit (figure 2(46) and column 4, lines 63-67 of Hayashi) and the gradation adjustment circuit (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi). Since the CMYK halftone data is processed by passing said CMYK halftone data successively through said image quality correction circuit and said gradation adjustment circuit, said CMYK halftone data is effectively blended since factors from both operations have adjusted said CMYK halftone data before being sent to the output processor (figure 2(48) and column 5, lines 3-6 of Hayashi).

Rourke in view of Barry is combinable with Hayashi because they are from the same field of endeavor, namely digital color image data halftoning, processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the two halftone processes and the blending process taught by Hayashi to the image data with the image processor taught by Rourke in view of Barry. The motivation for doing so would have been that both halftone operations improve the overall quality of the resultant image (column 4, lines 65-67 and column 5, lines 1-3 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Rourke in view of Barry to obtain the invention as specified in claim 14.

Regarding claim 16: Rourke in view of Barry does not disclose expressly that changed RIP Data is recorded on a recording surface as a color separation image, and plural color separation images are recorded and eventually transferred to a receiver sheet in superposed registered relationship to form a process color image.

Hayashi discloses that image data is recorded on a recording surface (column 3, lines 35-54 of Hayashi) as a color separation image (column 3, lines 33-34 and lines 60-67 of Hayashi), and plural color separation images are recorded and eventually transferred to a receiver sheet in superposed registered relationship (column 3, lines 54-59 of Hayashi) to form a process color image (column 3, lines 60-67 of Hayashi).

Rourke in view of Barry is combinable with Hayashi because they are from the same field of endeavor, namely digital color image data halftoning, processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print an image and plural color separation images on a receiver sheet in superposed registered relationship, as taught by Hayashi, wherein the image is the changed RIP Data taught by Rourke in view of Barry. The motivation for doing so would have been to provide an output for the resultant color image (column 3, lines 33-34 of Hayashi).

Therefore, it would have been obvious to combine Hayashi with Rourke in view of Barry to obtain the invention as specified in claim 16.

Regarding claim 19: Rourke in view of Barry does not disclose expressly subjecting the altered separated rasterized contone gray level image data to first and second halftone processes and then blending the respective outputs from the first and second halftone processes.

Hayashi discloses subjecting image data to a first halftone process (figure 2(46) and column 4, lines 63-67 of Hayashi) and a second halftone process (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi), and then blending the respective outputs from said first and second halftone processes (figure 2(48) and column 5, lines 3-6 of Hayashi). The image data is saturation adjusted by the color correction circuit (figure 2(43) and column 5, lines 18-20 of Hayashi). Said image data is then sent through two halftone processing devices. Said devices are the image quality correction circuit (figure 2(46) and column 4, lines 63-67 of Hayashi) and the gradation adjustment circuit (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi). Since the CMYK halftone data is processed by passing said CMYK halftone data successively through said image quality correction circuit and said gradation adjustment circuit, said CMYK halftone data is effectively blended since factors from both operations have adjusted said CMYK halftone data before being sent to the output processor (figure 2(48) and column 5, lines 3-6 of Hayashi).

Rourke in view of Barry is combinable with Hayashi because they are from the same field of endeavor, namely digital color image data halftoning, processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the two halftone processes and the blending process taught by Hayashi to the image data with the image processor taught by Rourke in view of Barry. The motivation for doing so would have been that both halftone operations improve the overall quality of the resultant image (column 4, lines 65-67 and column 5, lines 1-3 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Rourke in view of Barry to obtain the invention as specified in claim 19.

Regarding claim 21: Rourke in view of Barry does not disclose expressly that altered separated rasterized contone gray level image data is recorded on a recording surface as a color separation image, and plural color separation images are recorded and eventually transferred to a receiver sheet in superposed registered relationship to form a process color image.

Hayashi discloses that image data is recorded on a recording surface (column 3, lines 35-54 of Hayashi) as a color separation image (column 3, lines 33-34 and lines 60-67 of Hayashi), and plural color separation images are recorded and eventually transferred to a receiver sheet in superposed registered

relationship (column 3, lines 54-59 of Hayashi) to form a process color image (column 3, lines 60-67 of Hayashi).

Rourke in view of Barry is combinable with Hayashi because they are from the same field of endeavor, namely digital color image data halftoning, processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print an image and plural color separation images on a receiver sheet in superposed registered relationship. as taught by Hayashi, wherein the image is the altered separated rasterized contone gray level image data taught by Rourke in view of Barry. The motivation for doing so would have been to provide an output for the resultant color image (column 3, lines 33-34 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Rourke in view of Barry to obtain the invention as specified in claim 21.

Regarding claim 28: Rourke in view of Barry does not disclose expressly that the image processor is configured to alter the RIP Data to first and second halftone processes and then blend the respective outputs from the first and second halftone processes to provide a blended output.

Hayashi discloses altering image data with a first halftone process (figure 2(46) and column 4, lines 63-67 of Hayashi) and a second halftone process (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi), and then blending the respective outputs from said first and second halftone processes to provide a blended output (figure 2(48) and column 5, lines 3-6 of Hayashi). The image data is saturation adjusted by the color correction circuit (figure 2(43) and column 5, lines 18-20 of Hayashi). Said image data is then sent through two halftone processing devices. Said devices are the image quality correction circuit (figure 2(46) and column 4, lines 63-67 of Hayashi) and the gradation adjustment circuit (figure 2(47) and column 4, line 67 to column 5, line 3 of Hayashi). Since the CMYK half-tone data is processed by passing said CMYK halftone data successively through said image quality correction circuit and said gradation adjustment circuit, said CMYK halftone data is effectively blended since factors from both operations have adjusted said CMYK halftone data before being sent to the output processor (figure 2(48) and column 5, lines 3-6 of Hayashi).

Rourke in view of Barry is combinable with Hayashi because they are from the same field of endeavor, namely digital color image data halftoning, processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the two halftone processes and the blending process taught by Hayashi to the image data with the image processor taught by Rourke in view of Barry. The motivation for doing so would have been that both halftone operations improve the overall quality of the resultant image (column 4, lines 65-67 and column 5, lines 1-3 of

Hayashi). Therefore, it would have been obvious to combine Hayashi with Rourke in view of Barry to obtain the invention as specified in claim 28.

Regarding claim 30: Rourke in view of Barry does not disclose expressly that altered RIP Data is recorded on a recording surface as a color separation image, and plural color separation images are recorded and eventually transferred to a receiver sheet in superposed registered relationship to form a process color image.

Hayashi discloses that image data is recorded on a recording surface (column 3, lines 35-54 of Hayashi) as a color separation image (column 3, lines 33-34 and lines 60-67 of Hayashi), and plural color separation images are recorded and eventually transferred to a receiver sheet in superposed registered relationship (column 3, lines 54-59 of Hayashi) to form a process color image (column 3, lines 60-67 of Hayashi).

Rourke in view of Barry is combinable with Hayashi because they are from the same field of endeavor, namely digital color image data halftoning, processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to print an image and plural color separation images on a receiver sheet in superposed registered relationship, as taught by Hayashi, wherein the image is the altered RIP Data taught by Rourke in view of Barry. The motivation for doing so would have been to provide an output for the resultant color image (column 3, lines 33-34 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Rourke in view of Barry to obtain the invention as specified in claim 30.

Further regarding claim 40: Hayashi discloses that the changing step changes a color saturation represented by the RIP data (column 8, lines 30-37 of Hayashi).

Further regarding claim 41: Hayashi discloses that the altering step changes a color saturation represented by the separated rasterized contone gray level image data (column 8, lines 30-37 of Hayashi).

Regarding claims 42 and 44: Rourke discloses that ink jet printer, laser printers, and full process color printers are used in the overall system (column 6, lines 48-54 of Rourke). Therefore, it would be reasonable to assume that a color printer used in the system of Rourke would be a CMYK printer, and thus the RIP Data is rasterized CMYK image data. However, Rourke in view of Barry does not disclose expressly that the RIP Data (or RID) is rasterized CMYK image data.

Hayashi discloses that the RIP Data (or RID) is rasterized CMYK image data (figure 1; column 2, lines 61-63; and column 4, lines 53-57 of Hayashi). Image data used for the output of a color copying machine is clearly raster image data (RIP Data or RID).

Rourke in view of Barry is combinable with Hayashi because they are from the same field of endeavor, namely digital color image data halftoning, processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use CMYK image data for the RIP Data (or RID), as taught by Hayashi. The suggestion for doing so would have been that the CMYK color set is a standard and commonly used set of ink colors for color copiers and printers. Therefore, it would have been obvious to combine Hayashi with Rourke in view of Barry to obtain the invention as specified in claims 42 and 44.

Further regarding claim 43: Hayashi discloses that the image processor is configured to alter a color saturation represented by the RIP data (column 8, lines 30-37 of Hayashi).

Since the altering step is performed in accordance with the operator's adjustments (figure 11(145) and column 12, lines 49-52 of Rourke), the color saturation alteration taught by Hayashi would also, by combination with Rourke in view of Barry, be performed in accordance with the operator's adjustments.

5. Claims 15, 20 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rourke (US Patent 5,995,721) in view of Barry (US Patent 5,596,416), Hayashi (US Patent 5,790,282), and Miller (US Patent 5,731,823).

Regarding claims 15, 20 and 29: Rourke in view of Barry does not disclose expressly that the image processor is configured to modify the blended output into a binary file and subjects the binary image file to an edge enhancement process to reduce the jaggedness in the image.

Hayashi discloses modifying the blended output into a binary image file. After the image data is processed, said image data is sent to the output control circuit, which then generates the signals needed to output said image data (column 5, lines 1-6 of Hayashi). In order to output said image data after processing, the creation of a binary image file for the output in some form, whether on a hard drive, in RAM, *et cetera*, is inherently required. Otherwise, there would no longer be any data to access for the purpose of output.

Rourke in view of Barry is combinable with Hayashi because they are from the same field of endeavor, namely digital color image data halftoning, processing and printing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to take the output of the blending operation and modify said output into a binary image file, as taught by Hayashi. The motivation for doing so would have been to have the binary data with which to produce an output signal for the printer (column 5, lines 4-6 of Hayashi). Therefore, it would have been obvious to combine Hayashi with Rourke in view of Barry.

Rourke in view of Barry and Hayashi does not disclose expressly that the image processor subjects the binary image file to an edge enhancement process to reduce jaggedness in the image.

Miller discloses subjecting the binary image file to an edge enhancement process to reduce jaggedness in the image (column 9, lines 50-52 of Miller).

Rourke in view of Barry and Hayashi is combinable with Miller because they are from the same field of endeavor, namely digital image document data halftoning and processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to enhance the edges in the binary image file, thus reducing the jaggedness in the image. The motivation for doing so would have been to enhance the edge definition in the image (column 9, lines 51-52 of Miller). Therefore, it would have been obvious to combine Miller with Rourke in view of Barry and Hayashi to obtain the invention as specified in claims 15, 20 and 29.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James A. Thompson
Examiner
Technology Division 2625

16 January 2007

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